with fishes because they are visible and edible, and disappear as springs cease flowing, streams are depleted of water, and rivers and lakes are modified and polluted. In the United States, interest in protecting fresh waters centers around endangered species (160 fish now listed) and sport fisheries. There is, however, a growing realization that managing waterways at the scale of watersheds (catchments) is not only good for the biota but good for people, with such benefits as reducing the impacts of flooding, recreation, and providing habitat for a wide array of wildlife. This book is about watershed management and conservation, focused on fishes. It consists of 27 chapters, most of which could stand alone but have been reasonably well integrated by the editors. Most chapters focus on watersheds as the landscape units that are most amenable to conservation on a broad scale because such management can integrate human use with habitat conservation in a region with definable boundaries.

The useful introductory chapter is followed by four additional chapters that discuss multispecies approaches to aquatic conservation, which often wind up protecting or restoring watersheds. They are important introductions to large-scale efforts to protect native fishes: Western Native Trout Initiative, Desert Fish Habitat Partnership, National Fish Habitat Partnership, and similar partnerships in other regions. These multiagency cooperative ventures, as shown in the chapters, help to prioritize habitat restoration efforts over much of the U.S. They are valiant efforts but small compared to the need, often focusing on individual stream projects. Nevertheless, they are important and should be on the radar of fish conservationists nationwide. Importantly, they cross many jurisdictional boundaries. This volume is a good introduction to these projects.

Other chapters discuss fish conservation efforts by various states and regions around the U.S., including eight chapters about watersheds in Texas, which I enjoyed because I know so little about them. Many of these chapters talk about establishing Native Fish Conservation Areas (watersheds with intact native fish assemblages). An attractive feature of the book is the color photographs of streams that figure in the various conservation efforts discussed. They are the kind of photographs most of us fish biologists take of our study waters. They carefully frame the streams to make them look as wild and natural as possible. It reflects the apparent optimistic attitudes of the many authors that watersheds and streams can be saved to benefit future generations of both people and fish. In short, this is a useful and attractive volume for anyone interested in aquatic conservation.

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From Catastrophe to Recovery: Stories of Fishery Management Success.

Edited by Charles C. Krueger, William W. Taylor, and So-Jung Youn. Bethesda (Maryland): American Fisheries Society. $79.00. xvi + 586 p.; ill.; index. ISBN: 978-1-934874-55-4. 2019.

In a world of endangered fishes and depleted fisheries, it is rare to read about management successes, perhaps because unequivocal examples *are* rare. Here, however, we have a compilation of 21 case histories of fish management that resulted in successful outcomes, from saving endangered species to restoring commercial fisheries. Most (16) are from fresh water in North America. The book begins with an excellent introduction by the editors who explain their goal of finding common themes in stories of management success. This search for commonality drives the similar formats of most accounts, a smart move on the part of the editors. Each includes, for example, a section on Lessons Learned. The introduction summarizes these lessons but notes that success is sometimes driven by fortuitous events, by skeptics (who force managers to define their goals clearly), and by being able to deal with uncertainty. Another commonality is the lengthy history of each project, which will be of great help to readers.

Stephens et al. present the 100-year history of managing California's spectacular golden trout. It took a major multiagency effort to save the trout, overcoming decades of poor management. Moore and Kulp show the difficulties of restoring native brook trout to a national park, in the face of unexpected obstacles such as hungry bears and local fishermen planting nonnative trout in restored reaches as a protest against big government. Thomas et al. discuss the recovery of the Ohio River (U.S.) from supporting just a few fish species in highly polluted waters to a river ecosystem once again supporting 100 species of native fishes. Part of the reason this happened was the federal Clean Water Act in 1972, a theme in other accounts as well. Thus, Weidel et al. show how deepwater sculpin unexpectedly became abundant in Lake Huron, following its extirpation, the result of improved water quality. Kraft tells the story of recovery of Adirondack mountain lakes from acidification by acid rain; recovery was largely due to legislation that curbed air-borne pollutants. In Sweden, Hellström et al. show how the restoration of the Vindel River from abusive logging practices allowed fisheries for brown trout and Atlantic salmon to re-establish. This served as an example for restoration of other rivers in the Baltic region.

All of the cases had their special challenges, but most were successful because there was a group of people, often academic and agency fish biologists, who were dedicated to restoring their local waters

no matter what setbacks occurred. Each account presents its own experience on how this cooperative environment was created. I think a broad spectrum of aquatic biologists and managers will enjoy these stories and find them useful as well.

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Structured Decision Making: Case Studies in Natural Resource Management. *Wildlife Management and Conservation.*

Edited by Michael C. Runge, Sarah J. Converse, James E. Lyons, and David R. Smith. Published in association with The Wildlife Society by Johns Hopkins University Press, Baltimore, Maryland. $74.95. xii + 272 p.; ill.; index. ISBN: 9781421437569 (hc); 9781421437576 (eb). 2020.

This edited volume introduces readers to the concept of decision analysis in the context of resource management decisions, with separate sections addressing structuring or appropriately framing the decision, making tradeoffs across decision-relevant objectives, optimizing the allocation of scarce financial resources, dealing with inherent risk and uncertainty, identifying critical knowledge gaps, and solving linked and dynamic decisions. Each section includes a chapter providing an overview of these basic components and tools of decision analysis, followed by several case studies demonstrating the application of these tools to real-world natural resource management challenges. Although adaptive management may have been the buzzword of the 1990s for resource managers, decision analysis is now the cutting-edge approach for facilitating participatory decision-making, making tradeoffs across the full suite of objectives, and ultimately dealing with the inherent risk and uncertainty in complex socioecological systems. Both science and values play critical roles in resource management decisions, and decision analysis ensures that the decision is value-focused, with the best available science informing how different solutions perform across the values of interest. Although textbooks exist on the use of quantitative decision analytic tools, or the application of more qualitative decision-structuring tools to multistakeholder decisions, this edited volume is the first to do both in the context of resource management challenges. The text provides resource managers with a suite of tools, from the qualitative or process-focused to the quantitative or outcome-focused, applied to challenges ranging from the management of wildlife and habitat to water and fossil fuels. The editors and authors are experts in this field, with extensive experience applying these tools to real-world resource management decisions.

This volume should be recommended reading for all resource managers, as often their training focuses too much on understanding the natural system, as opposed to understanding how best to make decisions with a careful eye to science *and* values. Managers are also unlikely to be trained in risk management or stakeholder engagement, yet the majority of what many of them will do on the job is likely tied to these critical challenges. Humans in general are not well-equipped to deal with these challenges—whether that be the careful consideration of multiple objectives, the need to consider tradeoffs across time and space, or the necessity of making decisions with limited time and information. The tools of decision analysis can help address these challenges and lead to more transparent and values-consistent decisions over time.

I would highly recommend this volume not only to practitioners but suggest that it be required reading for students being trained as resource managers. This would be an excellent textbook in an advanced undergraduate or graduate course on decision-making in an environmental or resource management department, perhaps in combination with the volume by Gregory et al. (2012. *Structured Decision Making: A Practical Guide to Environmental Management Choices.* Chichester (U.K.): Wiley Blackwell), which focuses a bit more on qualitative considerations, but includes fewer full case studies and applications.

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